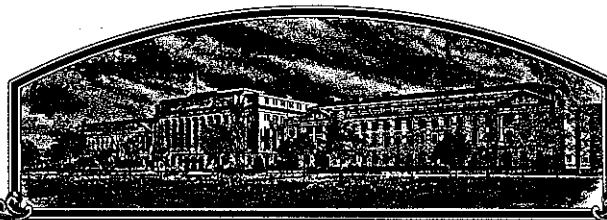


No.

8000084



# THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

**Busch Agricultural Resources, Inc.**

Whereas, THERE HAS BEEN PRESENTED TO THE

**Secretary of Agriculture**

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *eighteen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

BARLEY

'Bumper'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington this 31st day of August in the year of our Lord one thousand nine hundred and eighty-four.

Attest

*Kenneth H. G.*  
Commissioner  
Plant Variety Protection Office  
Agricultural Marketing Service

*John R. Block*  
Secretary of Agriculture

# APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: See Reverse.

No certificate for plant variety protection may be issued unless a completed application form has been received (5 U.S.C. 553).

1a. TEMPORARY DESIGNATION OF VARIETY <b>NAPB-1 or N6SB1330-75B</b>		1b. VARIETY NAME <b>Bumper</b>		FOR OFFICIAL USE ONLY PV NUMBER <b>8000084</b>	
2. KIND NAME <b>Barley</b>		3. GENUS AND SPECIES NAME <b>Hordeum vulgare L.</b>		FILING DATE <b>4/3/80</b>	TIME <b>1:45</b> <b>P.M.</b>
4. FAMILY NAME (BOTANICAL) <b>Gramineae</b>		5. DATE OF DETERMINATION <b>January 7, 1980</b>		FEE RECEIVED \$ <b>500.00</b> \$ <b>250.00</b>	DATE <b>4/3/80</b> <b>7/26/84</b>
6. NAME OF APPLICANT(S) <b>BUSCH AGRICULTURAL RESOURCES, INC.</b> <b>North American Plant Breeders</b>		7. ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) <b>5201 Johnson Dr. ONE BUSCH PLACE</b> <b>Mission, KS 66205 ST. LOUIS, MO. 63118</b>		8. TELEPHONE AREA CODE AND NUMBER <b>913-384-4940 KS</b> <b>303-532-3721 CO</b>	
9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: (Corporation, partnership, association, etc.) <b>Partnership</b>			10. IF INCORPORATED, GIVE STATE AND DATE OF INCORPORATION <b>Stamford, CT</b>		11. DATE OF INCORPORATION <b>March 9, 1973</b>
12. NAME AND MAILING ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS: <b>Giles Dixon DR. MELVERN K. R. E. Heiner or C. Bruns</b> <b>NAPB, P.O. Box 2955 ANDERSON P.O. Box 30 806 North Second St.</b> <b>Mission, KS 66205 Berthoud, CO 80513</b>					

## 13. CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:

- ☒ 13A. Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.)
- ☒ 13B. Exhibit B, Novelty Statement.
- ☒ 13C. Exhibit C, Objective Description of the Variety (Request form from Plant Variety Protection Office.)
- ☒ 13D. Exhibit D, Additional Description of the Variety.

14a. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See Section 83(a). (If "Yes," answer 14B and 14C below.) ☒ YES ☐ NO

14b. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? ☒ YES ☐ NO

14c. IF "YES," TO 14B, HOW MANY GENERATIONS OF PRODUCTION BEYOND BREEDER SEED? ☒ FOUNDATION ☒ REGISTERED ☒ CERTIFIED

15a. DID THE APPLICANT(S) FILE FOR PROTECTION OF THIS VARIETY IN OTHER COUNTRIES? ☐ YES ☒ NO (If "Yes," give name of countries and dates.)

15b. HAVE RIGHTS BEEN GRANTED THIS VARIETY IN OTHER COUNTRIES? ☐ YES ☒ NO (If "Yes," give name of countries and dates.)

16. DOES THE APPLICANT(S) AGREE TO THE PUBLICATION OF HIS/HER (THEIR) NAME(S) AND ADDRESS IN THE OFFICIAL JOURNAL? ☒ YES ☐ NO

17. The applicant(s) declare(s) that a viable sample of basic seed of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

March 24, 1980.  
(DATE)

[Signature]  
(SIGNATURE OF APPLICANT)

(DATE)

(SIGNATURE OF APPLICANT)

## ORIGIN AND BREEDING HISTORY

Pedigree: Selection from Larker F<sub>2</sub> bulks

Date of Cross: Unknown, original cross made at North Dakota State University and obtained by North American Plant Breeders

History: F<sub>2</sub> bulks of Larker crosses were grown at Casselton, North Dakota in 1973. Single head selections were advanced to F<sub>3</sub> head rows and grown at Casselton, North Dakota in 1974. A single selected head was grown as a F<sub>4</sub> head row in winter increase (74-75) at Yuma, Arizona. The bulked seed from the F<sub>4</sub> head row was entered in 1975 midwest yield trials as N6SB1330-75. During the summer of 1975, five single heads were selected from the F<sub>5</sub> bulk and increased in California during the winter of 1975-76. On the basis of malting quality tests sub-family B was chosen and used as the pure seed and yield trial seed source in 1976. N6SB-1330-75 was yield tested at two midwestern locations in 1975. N6SB-1330-75B (F<sub>2</sub> derived - F<sub>5</sub> head selection) was yield tested at three midwestern locations in 1976, 1977, 1978, and 1979. N6SB-1330-75B was also in University of Minnesota tests (3 sites) in 1977, 1978, and 1979; North Dakota State University tests (4 sites) in 1978 and 1979; and in the regional Mississippi Valley Barley nursery, in 1979. In these trials N6SB-1330-75B was given the experimental designation as NAPB-1. Purification was initiated in 1976 when 91 plant rows (F<sub>6</sub>) were grown in Colorado. From these 124 plants were selected and grown as plant rows (F<sub>7</sub>) in Colorado in 1977. Head selections have been made each year and are grown to constitute breeder seed. The original source of breeder seed came from bulked seed from the 1977 Colorado 124 plant rows. We consider Bumper to be stable and uniform with no off-type variants.

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## Exhibit B

## STATEMENT OF NOVELTY

Novelty is based on the unique combination of the following characters: 'Bumper' most closely resembles 'Glenn' (both have a combination of rough awns and long rachilla hairs). However, 'Bumper' can be easily distinguished by the following characteristics:

1. Bumper is 3 days later in heading than Glenn barley.
2. Bumper is 4 days later in maturity than Glenn barley.
3. Bumper has better resistance to spot blotch (Helminthosporium sativa) than Glenn.
4. Bumper is 3 cm taller than Glenn barley.
5. Bumper has a more nodding head than Glenn.
6. Glenn has a higher degree of deciduous awns than Bumper.

Average Agronomic Performance of Bumper and Valley  
in Midwest Yield Trials (1976-79)

	Heading 1/				Score 79(3)	Height (cm)					Lodging 2/					$\bar{X}$
	Days					$\bar{X}$ (7)					$\bar{X}$					
	77(3)	78(3)	79	(1)			77 (3)	78 (3)	79 (3)	79 (2)		76(1)	77 (3)	78 (3)	79 (2)	
Bumper	57	56	70.5		3.5	61.2	101.6	83.8	89.4	91.6	1.0	1.2	3.7	5.6	3.5	
Valley	56	56	69.3		3.7	60.4	99.0	88.9	87.4	90.1	1.5	2.6	4.4	5.0	4.0	
Larker	54	54	65.5		2.7	57.8	94.0	86.4	86.0	88.8	--	3.0	3.5	7.0	4.5	
Beacon	53	53	--		1.1	--	94.0	86.4	88.7	89.7	--	0.7	1.7	5.0	2.5	
Nordic	55	55	--		--	--	96.5	81.3	--	--	--	1.0	2.2	--	--	
Bonanza	57	55	67.3		2.9	59.8	99.1	88.9	97.0	95.0	--	1.1	4.0	6.4	3.8	
Klondike	54	54	--		3.8	--	99.1	96.5	83.0	92.8	--	--	3.7	5.0	--	
Morex	55	53	64.0		2.3	57.3	86.4	86.4	88.6	87.1	--	--	2.5	6.2	--	
Glenn	--	--	64.0		1.6	--	--	--	86.0	--	--	--	--	5.8	--	

( ) = Station years data  
 1/ = Days= days from planting; Score: 1=very early; 5=late  
 2/ = Lodging = 1 = good straw; 9 = poor straw

8000084

Average Agronomic Performance of Bumper and Valley  
in Midwest Yield Trials (1976-79)

	Worth 1/			Leaf Spot 2/			3/ Dec. Awns	Straw4/ Breakage	Awn 5/ Surface	Head 6/ Erect
	77 (3)	78 (3)	$\bar{X}$ (6)	78 (3)	79 (2)	$\bar{X}$ (5)	79 (2)	79 (2)	78 (1)	79 (2)
Bumper	1.2	3.7	2.5	3.9	2.0	2.95	1.0	4.5	3.0	3.5
Valley	2.6	4.4	3.5	3.6	1.7	2.65	2.5	4.0	1.0	3.7
Larker	3.0	3.5	3.3	5.4	4.3	4.85	2.5	7.0	2.0	2.3
Beacon	0.7	1.7	1.2	1.4	2.7	2.55	1.5	7.5	5.0	1.1
Nordic	1.0	2.2	1.6	2.3	--	--	--	--	5.0	--
Bonanza	1.1	4.0	2.6	2.3	2.0	2.15	2.0	7.5	1.0	2.9
Klondike	--	3.7	--	5.5	1.3	3.40	2.5	5.5	1.0	3.8
Morex	--	2.5	--	2.4	3.3	2.85	3.5	--	2.0	2.3
Glenn	--	--	--	--	3.7	--	3.0	--	4.0	1.6

( ) = station years data

1/ = Worth = total phenotypic appearance (1=good; 5=poor)

2/ = 1 = good; 9 = poor

3/ = 1 = awns intact; 5 = awns lost

4/ = 1 = good; 9 = poor

5/ = 1 = smooth; 5 = rough

6/ = 1 = erect; 5 = decumbent

Agronomic Performance Data of Bumper and Valley in Trials  
from the University of Minnesota

	Yield bu/a								
	77	77	78	78	78	77	78	79	78-79
	SP	CK	SP	CK	MO	$\bar{X}$	$\bar{X}$	$\bar{X}$	$\bar{X}$
Bumper	81.8	119.3	50.8	96.0	63.1	100.6	70.0	51.2	73.9
Valley	93.0	99.5	50.3	97.0	50.7	96.3	66.0	55.7	72.7
Larker	---	---	46.5	81.1	58.8	---	64.4	44.4	54.4
Manker	85.1	100.0	70.1	95.1	73.4	97.6	79.5	---	88.6

	Heading			Height <sup>1/</sup>			Lodging %			% Plump		
	77	78	79	77	78	79	77	78	79	77	78	79
Bumper	6/8	6/21	6/10	72	87	89	37	50	41	64	70	63
Valley	6/7	6/20	6/9	77	89	95	49	57	43	56	60	56
Larker	--	6/18	6/8	--	79	89	--	70	53	--	68	57
Manker	6/5	6/18	--	77	82	--	40	47	--	63	76	--

<sup>1/</sup> Height - cm

SP = St. Paul  
CK = Crookston  
MO = Morris

OBJECTIVE DESCRIPTION OF VARIETY  
BARLEY (*HORDEUM VULGARE*)

INSTRUCTIONS: See Reverse.

NAME OF APPLICANT(S)

North American Plant Breeders

ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code)

5201 Johnson Dr.  
Mission, KS 66205

FOR OFFICIAL USE ONLY

PVPO NUMBER

8000084

VARIETY NAME OR TEMPORARY  
DESIGNATION

Place the appropriate number that describes the varietal character of this variety in the boxes below.  
Place a zero in first box (i.e.     or   ) when number is either 99 or less or 9 or less.

## 1. GROWTH HABIT:

1 = SPRING 2 = FACULTATIVE WINTER 3 = WINTER  Early Growth: 1 = PROSTRATE 2 = SEMIPROSTRATE  
3 = ERECT

## 2. MATURITY (50% Flowering):

1 = EARLY (California Mariout) 2 = MIDSEASON (Betzes) 3 = LATE (Frontier)

No. of days Earlier than  1 = BETZES 2 = CALIFORNIA MARIOUT 3 = CONQUEST 4 = DICKSON  
 No. of days Later than  5 = PIROLINE 6 = PRIMUS 7 = UNITAN

## 3. PLANT HEIGHT (From soil level to top of head):

1 = SEMIDWARF 2 = SHORT (California Mariout) 3 = MEDIUM TALL (Betzes) 4 = TALL (Conquest)

Cm. Shorter than  1 = BETZES 2 = CALIFORNIA MARIOUT 3 = CONQUEST 4 = DICKSON  
 Cm. Taller than  5 = PIROLINE 6 = PRIMUS 7 = UNITAN

## 4. STEM:

Exertion (Flag to spike at maturity): 1 = 0 - 3 cm. 2 = 3 - 10 cm.  Anthocyanin: 1 = ABSENT 2 = PRESENT  
3 = 10 - 15 cm.

NO. OF NODES (Originating from node above ground)

Collar Shape: 1 = CLOSED with Nick 2 = V-SHAPED 3 = OPEN  Shape of Neck: 1 = STRAIGHT 2 = SNAKY (slightly)  
4 = MODIFIED CLOSED OR OPEN 3 = OTHER (Specify)

## 5. LEAF:

Basal leaf sheath (seedling): 1 = GLABROUS 2 = PUBESCENT  Position of flag leaf (at boot stage): 1 = DROOPING  
2 = UPRIGHT

Waxiness: 1 = ABSENT (Glossy) 2 = SLIGHTLY WAXY   MM. WIDTH (First leaf below flag leaf)  
3 = WAXY

CM. LENGTH (First leaf below flag leaf)  Anthocyanin in leaf sheath: 1 = ABSENT 2 = PRESENT

## 6. HEAD:

Type: 1 = TWO-ROWED 2 = SIX-ROWED  Density: 1 = LAX 2 = ERECT (Not dense)  
3 = ERECT (Dense)

Shape: 1 = TAPERING 2 = STRAP 3 = CLAVATE  Waxiness: 1 = ABSENT (Glossy) 2 = SLIGHTLY WAXY  
4 = OTHER (Specify) 3 = WAXY

Lateral Kernels Overlap: 1 = NONE 2 = AT TIP  Rachis (Hair on edge): 1 = LACKING 2 = FEW 3 = COVERED  
3 = 1/4 1/2 OF HEAD

## 7. GLUME:

Length: 1 = 1/3 OF LEMMA 2 = 1/2 OF LEMMA  Hairs: 1 = NONE 2 = SHORT 3 = LONG  
3 = MORE THAN 1/2 OF LEMMA

Hair covering: 1 = NONE 2 = RESTRICTED TO MIDDLE 3 = CONFINED TO BAND 4 = COMPLETELY COVERED

Awns: 1 = LESS THAN EQUAL TO LENGTH OF GLUMES 2 = EQUAL TO LENGTH OF GLUMES  
3 = MORE THAN EQUAL TO LENGTH OF GLUMES

Awn Surface: 1 = SMOOTH 2 = SEMISMOOTH 3 = ROUGH



## 8. LEMMA:

- ☐ 5 Awn: 1 = AWNLESS 2 = AWNLETS ON CENTRAL ROWS, AWNLESS ON LATERAL ROWS  
3 = SHORT ON CENTRAL ROWS, AWNLETS ON LATERAL ROWS 4 = SHORT (less than equal to length of spike)  
5 = LONG (longer than spike) 6 = HOODED
- ☐ 3 Awn Surface: 0 = AWNLESS 1 = SMOOTH 2 = SEMISMOOTH 3 = ROUGH
- ☐ 3 Teeth: 1 = ABSENT 2 = FEW 3 = NUMEROUS ☐ 1 Hair: 1 = ABSENT 2 = PRESENT
- ☐ 3 Shape of base: 1 = DEPRESSION 2 = SLIGHT CREASE 3 = TRANSVERSE CREASE ☐ 2 Rachilla Hairs: 1 = SHORT 2 = LONG

## 9. STIGMA:

- ☐ 2 Hairs: 1 = FEW 2 = MANY

## 10. SEED:

- ☐ 2 Type: 1 = NAKED 2 = COVERED ☐ 1 Hairs on Ventral Furrow: 1 = ABSENT 2 = PRESENT
- ☐ 3 Length: 1 = SHORT (8.0 mm.) 2 = SHORT TO MIDLONG (7.5 - 9.0 mm.) 3 = MIDLONG (8.5 - 9.5 mm.)  
4 = MIDLONG TO LONG (9.0 - 10.5 mm.) 5 = LONG (10.0 mm.)
- ☐ 2 Wrinkling of hull: 1 = NAKED 2 = SLIGHTLY WRINKLED 3 = SEMIWRINKLED 4 = WRINKLED
- ☐ 1 Aleurone Color: 1 = COLORLESS (White or Yellow) 2 = BLUE
- ☐ 0 ☐ 5 PERCENT ABORTIVE ☐ 3 ☐ 9 GMS. PER 1000 SEEDS

## 11. DISEASE: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

- |                                       |                                             |                                         |                                             |
|---------------------------------------|---------------------------------------------|-----------------------------------------|---------------------------------------------|
| <input type="checkbox"/> 0 SEPTORIA   | <input type="checkbox"/> 2 NET BLOTCH       | <input type="checkbox"/> 2 SPOT BLOTCH  | <input type="checkbox"/> 0 POWDERY MILDEW   |
| <input type="checkbox"/> 1 LOOSE SMUT | <input type="checkbox"/> 0 BACTERIAL BLIGHT | <input type="checkbox"/> 0 COVERED SMUT | <input type="checkbox"/> 0 FALSE LOOSE SMUT |
| <input type="checkbox"/> 2 STEM RUST  | <input type="checkbox"/> 2 LEAF RUST        | <input type="checkbox"/> 0 SCAB         | <input type="checkbox"/> 0 SCALD            |
| <input type="checkbox"/> 0 AY         | <input type="checkbox"/> 0 BSMV             | <input type="checkbox"/> 0 BYDV         | <input type="checkbox"/> 0 OTHER (Specify)  |

## 12. INSECT: (0 = Not tested, 1 = Susceptible 2 = Resistant)

- |                                          |                                                |                                            |                                     |
|------------------------------------------|------------------------------------------------|--------------------------------------------|-------------------------------------|
| <input type="checkbox"/> 0 GREEN BUG     | <input type="checkbox"/> 0 ENGLISH GRAIN APHID | <input type="checkbox"/> 0 CHINCH BUG      | <input type="checkbox"/> 0 ARMYWORM |
| <input type="checkbox"/> 0 GRASS HOPPERS | <input type="checkbox"/> 0 CEREAL LEAF BEETLE  | <input type="checkbox"/> 0 OTHER (Specify) |                                     |
| HESSIAN FLY RACES                        |                                                | <input type="checkbox"/> GP                | <input type="checkbox"/> A          |
|                                          |                                                | <input type="checkbox"/> B                 | <input type="checkbox"/> C          |
|                                          |                                                | <input type="checkbox"/> D                 | <input type="checkbox"/> E          |
|                                          |                                                | <input type="checkbox"/> F                 | <input type="checkbox"/> G          |

## 13. CHEMICAL (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

- ☐ DDT ☐ OTHER (Specify) Not tested

## 14. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED:

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant tillering	Manker	Seed size	Larker
Leaf size	Manker	Coleoptile elongation	
Leaf color	Glenn	Seedling pigmentation	
Leaf carriage	Manker		

REFERENCES: The following publications may be used as a reference aid for the standardization of character descriptions and terms used in this form:

- Wiebe, G. A., and D. A. Reid, 1961, Classification of Barley Varieties Grown in the United States and Canada in 1958, Technical Bulletin No. 1224, U.S. Dept. of Agriculture.
- Reid, D. A., and G. A. Wiebe, 1968, Barley: Origin, Botany, Culture, Winter Hardiness, Genetics, Utilization, Pests, Agriculture Handbook No. 338, U.S. Dept. of Agriculture. pp. 61 - 84.
- Malting Barley Improvement Association, Milwaukee, Wisconsin, 1971, Barley Variety Dictionary.

COLOR: Nickerson's or any recognized color fan may be used to determine color of the described variety.

8000084

Exhibit D

BOTANICAL DESCRIPTION OF BUMPER

Bumper is a mid-tall six-rowed spring barley. It is midseason in maturity (similar to Bonanza and Klondike). It has an erect growth habit. The following are botanical characteristics of Bumper:

Stem: Mid-long, about 86 cm, moderately strong

Spike: Six-rowed, medium-long and semi-erect

Spikelets:

glumes more than 1/2 the length of the lemma, completely covered with hair

lemma awns - rough and long

kernels that are colorless, long haired rachilla, lemma awn longer than spike, rough surface with numerous teeth and hair absence, base of lemma has a transverse crease.

Leaf Characteristics (1st leaf below flag leaf): 24 cm long and 20 mm wide.

Collar: closed with nick

TRANSFER OF OWNERSHIP  
A PROTECTED BARLEY VARIETY

"BUMPER"

Plant Variety Protection Application Number 8000084

In consideration of Busch Agricultural Resources, Inc., One Busch Place, St. Louis, Missouri, entering into a contractual agreement dated October 27, 1982, with North American Plant Breeders Inc., Mission, Kansas, North American Plant Breeders Inc. does hereby convey to Busch Agricultural Resources, Inc., free from all encumbrances, ownership of "Bumper" protected barley variety, Barley Application Number 8000084, filing date of May 3, 1980.

IN WITNESS AND NOTARIZED HEREOF this \_\_\_\_\_ day of August 1983.

Witness

Jane S. Cortella  
Alma M. Weaver

NORTH AMERICAN PLANT BREEDERS INC.

BY: \_\_\_\_\_

Giles E. Dixon  
 Giles E. Dixon, Vice President  
 Research & Development

Sworn and subscribed to before me  
 this 9 day of August 1983.

My Commission Expires December 1, 1984

Mary Margaret Bell  
 Notary Public

MARY MARGARET BELL  
 NOTARY PUBLIC  
 STATE OF KANSAS  
 My Appt. Expires 12/1/84